RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/977,615B

Source: 1Fw/6

Date Processed by STIC: 3/19/05

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IFW16

RAW SEQUENCE LISTING   DATE: 03/19/2005
PATENT APPLICATION: **US/09/977,615B**   TIME: 10:30:45

Input Set : **A:\Multi-Code Seq Listing-2005-Mar.ST25.txt**
Output Set: **N:\CRF4\03192005\I977615B.raw**

```
 3 <110> APPLICANT: EraGen Biosciences, Inc.
 4        Grenier, Jennifer
 5        Marshall, David
 6        Prudent, James
 7        Richmond, Craig
 8        Roesch, Eric
 9        Scherrer, Christopher
10        Sherrill, Christopher
11        Ptacin, Jerod
13 <120> TITLE OF INVENTION: Solid Support Assay Systems and Methods Utilizing Non-
Natural
14        Bases
16 <130> FILE REFERENCE: PAT015-US5
18 <140> CURRENT APPLICATION NUMBER: 09/977,615B
19 <141> CURRENT FILING DATE: 2001-10-15
21 <150> PRIOR APPLICATION NUMBER: 60/240,397
22 <151> PRIOR FILING DATE: 2000-10-14
24 <150> PRIOR APPLICATION NUMBER: 60/282,831
25 <151> PRIOR FILING DATE: 2001-04-10
27 <150> PRIOR APPLICATION NUMBER: 09/861,292
28 <151> PRIOR FILING DATE: 2001-05-18
30 <150> PRIOR APPLICATION NUMBER: 60/293,259
31 <151> PRIOR FILING DATE: 2001-05-22
33 <160> NUMBER OF SEQ ID NOS: 165
35 <170> SOFTWARE: PatentIn version 3.2
37 <210> SEQ ID NO: 1
38 <211> LENGTH: 10
39 <212> TYPE: DNA
40 <213> ORGANISM: Artificial
42 <220> FEATURE:
43 <223> OTHER INFORMATION: synthetic oligonucleotide
46 <220> FEATURE:
47 <221> NAME/KEY: modified_base
48 <222> LOCATION: (3)..(3)
49 <223> OTHER INFORMATION: n represents iso-cytosine
52 <220> FEATURE:
53 <221> NAME/KEY: modified_base
54 <222> LOCATION: (6)..(6)
55 <223> OTHER INFORMATION: n represents iso-cytosine
59 <400> SEQUENCE: 1
W--> 60 gangtntgtc                                                    10
63 <210> SEQ ID NO: 2
64 <211> LENGTH: 10
65 <212> TYPE: DNA
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RAW SEQUENCE LISTING
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Output Set: **N:\CRF4\03192005\I977615B.raw**

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        66 <213> ORGANISM: Artificial
        68 <220> FEATURE:
        69 <223> OTHER INFORMATION: synthetic oligonucleotide
        71 <220> FEATURE:
        72 <221> NAME/KEY: modified_base
        73 <222> LOCATION: (2)..(2)
        74 <223> OTHER INFORMATION: n represents iso-cytosine
        76 <220> FEATURE:
        77 <221> NAME/KEY: modified_base
        78 <222> LOCATION: (6)..(6)
        79 <223> OTHER INFORMATION: n represents iso-cytosine
        81 <400> SEQUENCE: 2
W-->    82 cngttnttcc                                                          10
        85 <210> SEQ ID NO: 3
        86 <211> LENGTH: 10
        87 <212> TYPE: DNA
        88 <213> ORGANISM: Artificial
        90 <220> FEATURE:
        91 <223> OTHER INFORMATION: synthetic oligonucleotide
        94 <220> FEATURE:
        95 <221> NAME/KEY: modified_base
        96 <222> LOCATION: (3)..(3)
        97 <223> OTHER INFORMATION: n represents iso-cytosine
        99 <220> FEATURE:
       100 <221> NAME/KEY: modified_base
       101 <222> LOCATION: (7)..(7)
       102 <223> OTHER INFORMATION: n represents iso-cytosine
       104 <400> SEQUENCE: 3
W-->   105 ggnttgntag                                                          10
       108 <210> SEQ ID NO: 4
       109 <211> LENGTH: 10
       110 <212> TYPE: DNA
       111 <213> ORGANISM: Artificial
       113 <220> FEATURE:
       114 <223> OTHER INFORMATION: synthetic oligonucleotide
       117 <220> FEATURE:
       118 <221> NAME/KEY: modified_base
       119 <222> LOCATION: (4)..(4)
       120 <223> OTHER INFORMATION: n represents iso-cytosine
       122 <220> FEATURE:
       123 <221> NAME/KEY: modified_base
       124 <222> LOCATION: (6)..(6)
       125 <223> OTHER INFORMATION: n represents iso-cytosine
       127 <400> SEQUENCE: 4
W-->   128 cttngntctc                                                          10
       131 <210> SEQ ID NO: 5
       132 <211> LENGTH: 10
       133 <212> TYPE: DNA
       134 <213> ORGANISM: Artificial
```

Input Set : **A:\Multi-Code Seq Listing-2005-Mar.ST25.txt**
Output Set: **N:\CRF4\03192005\I977615B.raw**

```
      136 <220> FEATURE:
      137 <223> OTHER INFORMATION: synthetic oligonucleotide
      140 <220> FEATURE:
      141 <221> NAME/KEY: modified_base
      142 <222> LOCATION: (2)..(2)
      143 <223> OTHER INFORMATION: n represents iso-cytosine
      145 <220> FEATURE:
      146 <221> NAME/KEY: modified_base
      147 <222> LOCATION: (6)..(6)
      148 <223> OTHER INFORMATION: n represents iso-cytosine
      150 <400> SEQUENCE: 5
W--> 151 cntcangaac                                                    10
      154 <210> SEQ ID NO: 6
      155 <211> LENGTH: 10
      156 <212> TYPE: DNA
      157 <213> ORGANISM: Artificial
      159 <220> FEATURE:
      160 <223> OTHER INFORMATION: synthetic oligonucleotide
      163 <220> FEATURE: -
      164 <221> NAME/KEY: modified_base
      165 <222> LOCATION: (5)..(5)
      166 <223> OTHER INFORMATION: n represents iso-cytosine
      168 <220> FEATURE:
      169 <221> NAME/KEY: modified_base
      170 <222> LOCATION: (8)..(8)
      171 <223> OTHER INFORMATION: n represents iso-cytosine
      173 <400> SEQUENCE: 6
W--> 174 gtagntangc                                                    10
      177 <210> SEQ ID NO: 7
      178 <211> LENGTH: 10
      179 <212> TYPE: DNA
      180 <213> ORGANISM: Artificial
      182 <220> FEATURE:
      183 <223> OTHER INFORMATION: synthetic oligonucleotide
      186 <220> FEATURE:
      187 <221> NAME/KEY: modified_base
      188 <222> LOCATION: (4)..(4)
      189 <223> OTHER INFORMATION: n represents iso-cytosine
      191 <220> FEATURE:
      192 <221> NAME/KEY: modified_base
      193 <222> LOCATION: (6)..(6)
      194 <223> OTHER INFORMATION: n represents iso-cytosine
      196 <400> SEQUENCE: 7
W--> 197 ggangntaac                                                    10
      200 <210> SEQ ID NO: 8
      201 <211> LENGTH: 10
      202 <212> TYPE: DNA
      203 <213> ORGANISM: Artificial
      205 <220> FEATURE:
```

Input Set : **A:\Multi-Code Seq Listing-2005-Mar.ST25.txt**
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```
      206 <223> OTHER INFORMATION: synthetic oligonucleotide
      209 <220> FEATURE:
      210 <221> NAME/KEY: modified_base
      211 <222> LOCATION: (2)..(2)
      212 <223> OTHER INFORMATION: n represents iso-cytosine
      214 <220> FEATURE:
      215 <221> NAME/KEY: modified_base
      216 <222> LOCATION: (7)..(7)
      217 <223> OTHER INFORMATION: n represents iso-cytosine
      219 <400> SEQUENCE: 8
W-->  220 cngtatngtg                                                      10
      223 <210> SEQ ID NO: 9
      224 <211> LENGTH: 10
      225 <212> TYPE: DNA
      226 <213> ORGANISM: Artificial
      228 <220> FEATURE:
      229 <223> OTHER INFORMATION: synthetic oligonucleotide
      232 <220> FEATURE:
      233 <221> NAME/KEY: modified_base
      234 <222> LOCATION: (4)..(4)
      235 <223> OTHER INFORMATION: n represents iso-cytosine
      237 <220> FEATURE:
      238 <221> NAME/KEY: modified_base
      239 <222> LOCATION: (10)..(10)
      240 <223> OTHER INFORMATION: n represents iso-cytosine
      242 <400> SEQUENCE: 9
W-->  243 catnggtang                                                      10
      246 <210> SEQ ID NO: 10
      247 <211> LENGTH: 10
      248 <212> TYPE: DNA
      249 <213> ORGANISM: Artificial
      251 <220> FEATURE:
      252 <223> OTHER INFORMATION: synthetic oligonucleotide
      255 <220> FEATURE:
      256 <221> NAME/KEY: modified_base
      257 <222> LOCATION: (5)..(5)
      258 <223> OTHER INFORMATION: n represents iso-cytosine
      260 <220> FEATURE:
      261 <221> NAME/KEY: modified_base
      262 <222> LOCATION: (9)..(9)
      263 <223> OTHER INFORMATION: n represents iso-cytosine
      265 <400> SEQUENCE: 10
W-->  266 gattntcgnc                                                      10
      269 <210> SEQ ID NO: 11
      270 <211> LENGTH: 10
      271 <212> TYPE: DNA
      272 <213> ORGANISM: Artificial
      274 <220> FEATURE:
      275 <223> OTHER INFORMATION: synthetic oligonucleotide
```

(handwritten annotation near line 239): "n" is at location 9

Input Set : **A:\Multi-Code Seq Listing-2005-Mar.ST25.txt**
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```
        278 <220> FEATURE:
        279 <221> NAME/KEY: modified_base
        280 <222> LOCATION: (4)..(4)
        281 <223> OTHER INFORMATION: n represents iso-cytosine
        283 <220> FEATURE:
        284 <221> NAME/KEY: modified_base
        285 <222> LOCATION: (6)..(6)
        286 <223> OTHER INFORMATION: n represents iso-cytosine
        288 <400> SEQUENCE: 11
W-->    289 gttnangacc                                                      10
        292 <210> SEQ ID NO: 12
        293 <211> LENGTH: 10
        294 <212> TYPE: DNA
        295 <213> ORGANISM: Artificial
        297 <220> FEATURE:
        298 <223> OTHER INFORMATION: synthetic oligonucleotide
        301 <220> FEATURE:
        302 <221> NAME/KEY: modified_base
        303 <222> LOCATION: (2)..(2)
        304 <223> OTHER INFORMATION: n represents iso-cytosine
        306 <220> FEATURE:
        307 <221> NAME/KEY: modified_base
        308 <222> LOCATION: (6)..(6)
        309 <223> OTHER INFORMATION: n represents iso-cytosine
        311 <400> SEQUENCE: 12
W-->    312 cngaangatc                                                      10
        315 <210> SEQ ID NO: 13
        316 <211> LENGTH: 10
        317 <212> TYPE: DNA
        318 <213> ORGANISM: Artificial
        320 <220> FEATURE:
        321 <223> OTHER INFORMATION: synthetic oligonucleotide
        324 <220> FEATURE:
        325 <221> NAME/KEY: modified_base
        326 <222> LOCATION: (4)..(4)
        327 <223> OTHER INFORMATION: n represents iso-cytosine
        329 <220> FEATURE:
        330 <221> NAME/KEY: modified_base
        331 <222> LOCATION: (9)..(9)
        332 <223> OTHER INFORMATION: n represents iso-cytosine
        334 <400> SEQUENCE: 13
W-->    335 caantacgnc                                                      10
        338 <210> SEQ ID NO: 14
        339 <211> LENGTH: 10
        340 <212> TYPE: DNA
        341 <213> ORGANISM: Artificial
        343 <220> FEATURE:
        344 <223> OTHER INFORMATION: synthetic oligonucleotide
        347 <220> FEATURE:
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 03/19/2005
PATENT APPLICATION: US/09/977,615B   TIME: 10:30:46

Input Set : A:\Multi-Code Seq Listing-2005-Mar.ST25.txt
Output Set: N:\CRF4\03192005\I977615B.raw

IFW

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 3,6
Seq#:2; N Pos. 2,6
Seq#:3; N Pos. 3,7
Seq#:4; N Pos. 4,8
Seq#:5; N Pos. 2,6
Seq#:6; N Pos. 5,8
Seq#:7; N Pos. 4,6
Seq#:8; N Pos. 2,7
Seq#:9; N Pos. 4,9
Seq#:10; N Pos. 5,9
Seq#:11; N Pos. 4,6
Seq#:12; N Pos. 2,6
Seq#:13; N Pos. 4,9
Seq#:14; N Pos. 4,8
Seq#:15; N Pos. 2,6,7
Seq#:16; N Pos. 4,8,9
Seq#:17; N Pos. 2,6,9
Seq#:18; N Pos. 3,6
Seq#:19; N Pos. 3,4,7
Seq#:20; N Pos. 3,6
Seq#:21; N Pos. 5,8,9
Seq#:22; N Pos. 5,7
Seq#:23; N Pos. 5,8
Seq#:24; N Pos. 5,8
Seq#:25; N Pos. 5,7,8
Seq#:26; N Pos. 2,7
Seq#:27; N Pos. 2,4,9
Seq#:28; N Pos. 2,3,7
Seq#:29; N Pos. 5,8
Seq#:30; N Pos. 5,7
Seq#:31; N Pos. 3,7
Seq#:32; N Pos. 4,8
Seq#:33; N Pos. 4,9
Seq#:34; N Pos. 4,7,9
Seq#:35; N Pos. 2,7
Seq#:36; N Pos. 3,7
Seq#:37; N Pos. 2,7
Seq#:38; N Pos. 4,9
Seq#:39; N Pos. 3,4,9
Seq#:40; N Pos. 2,6
Seq#:41; N Pos. 2,6,9
Seq#:42; N Pos. 3,6
Seq#:43; N Pos. 4,8
Seq#:44; N Pos. 5,8

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 03/19/2005
PATENT APPLICATION: US/09/977,615B   TIME: 10:30:46

Input Set : **A:\Multi-Code Seq Listing-2005-Mar.ST25.txt**
Output Set: **N:\CRF4\03192005\I977615B.raw**

```
Seq#:45; N Pos. 5,7
Seq#:46; N Pos. 4,8
Seq#:47; N Pos. 2,7
Seq#:48; N Pos. 3,6
Seq#:49; N Pos. 3,7
Seq#:50; N Pos. 3,4,9
Seq#:51; N Pos. 2,7
```

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

```
Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27
Seq#:28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51
Seq#:52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75
Seq#:76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99
Seq#:100,101,102,103,113,114,115,116,117,118,119,120,121,122,123,124,125,126
Seq#:127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144
Seq#:145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162
Seq#:163,164,165
```

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/977,615B

DATE: 03/19/2005
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Input Set : **A:\Multi-Code Seq Listing-2005-Mar.ST25.txt**
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```
L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:82 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:105 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:128 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:151 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:174 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:197 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:220 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:266 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:289 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
L:312 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:335 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:358 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
L:386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:414 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:442 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:493 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:516 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:544 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
L:567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:590 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
L:613 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:641 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
L:664 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:692 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0
L:720 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
L:743 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:766 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
L:789 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0
L:812 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0
L:835 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0
L:863 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0
L:886 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0
L:909 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0
L:932 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:955 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:0
L:983 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:0
L:1006 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0
L:1034 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
L:1057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0
L:1080 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
L:1103 M:283 W: Missing Blank Line separator, <400> field identifier
L:1104 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0
L:1127 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:0
L:1150 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:0
L:1173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:0
```

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L:1196 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:0
L:1219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:0
L:1247 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:0